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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/015,188	WICHMAN ET AL.	
	Examiner	Art Unit	
	Bryan J. Fox	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on 31 May 2007.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-25 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-25 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-4, 6, 11-14, 16, 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lindoff et al (US006700882B1) in view of Hook et al (US006473506B1) and further in view of Shi (US006728306B1).

Regarding **claim 1**, Lindoff et al discloses a system where a first mobile station is connected to a base station in a particular cell in a TDMA system. The uplink from the MS A to the BS takes place on a carrier frequency f1 and can carry uplink data D0(UL) and the training sequence TS A (see column 3, lines 1-21), which reads on the claimed "method for transmitting information in a communication system comprising at least a mobile communication network in which information is transferred from one or more transmitting devices to one or more receiving devices at least one training sequence is

used in the information transfer". Lindoff et al further discloses that in one embodiment, the MS A may have two antennas 230 and 730 for transmitting signals to the BS, which also may have two antennas 210 and 220 (see figure 9 and column 8, lines 24-33), which reads on the claimed "signals transmitted through at least two antennas are received in the receiving device". Lindoff et al also discloses that the MS may use the same training sequence TS A transmitted from both antennas (see figure 9). In this embodiment, however, Lindoff et al fails to expressly disclose in this embodiment that the same training sequence is transmitted with a different phase.

Lindoff et al also discloses in another embodiment uplink sequences are transmitted with different phase-offsets, so a first information sequence has a phi(0) and a second information sequence has a different phase offset phi(1) (see column 6, lines 16-34 and figure 5B).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the first discussed embodiment with the second discussed embodiment so that the MS with two different antennas transmits the same training sequence but with different phases in order to best take advantage of the benefits of the invention, such as increased spectrum efficiency (see column 2, lines 16-17). Also, the combining of various embodiments in full or in part is suggested by Lindoff et al (see column 8, lines 50-64). Lindoff et al fail to disclose a phase of the training sequence is changed by cyclically transferring the training sequence.

In a similar field of endeavor, Hook et al disclose rotating the phase of a training sequence (see column 4, lines 16-35).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Lindoff et al with Hook et al to include the above rotating the phase of the training sequence in order to efficiently transfer types of information as suggested by Hook et al (see column 4, lines 16-35). The combination of Lindoff et al and Hook et al fails to expressly disclose transferring symbols of the training sequence a certain number of bit positions.

In a similar field of endeavor, Shi discloses a training sequence that is cyclically shifted by advancing by one position each element in the vector and the last element is moved to the first element position or vice versa depending of the direction of the shift (see column 1, line 62 – column 2, line 17 and column 12, lines 9-16).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the combination of Lindoff et al and Hook et al to include the above cyclical shift in order to allow proper temporal alignment as suggested by Shi (see column 1, lines 59-61).

Regarding **claim 2**, the combination of Lindoff et al, Hook et al and Shi discloses that different information may be transmitted from two different antennas (see Lindoff et al column 8, lines 24-33 and figure 8B), which reads on the claimed "the transferred information is divided to be transmitted through at least two antennas to the receiving device". The receiving section at the mobile station receives a signal and converts it to a baseband signal as is known in the art. The baseband signal is fed from the block 404 to a synchronization unit 406 that correlates the received sequence with the known training sequences (TS A and TS B) in order to find a synchronization position, which is

used with the received burst to estimate the radio channels for the signals (see Lindoff et al figure 4 and column 4, lines 17-50). Lindoff et al then discloses that the receiver structure in the BS (which would be used in the uplink from MS to BS) is similar to the structure in the MS with the exception that the BS has an antenna array (see Lindoff et al column 5, lines 44-49), which reads on the claimed “in the receiving device, an examination is performed for the transmitted information using signals transmitted through different antennas”.

Regarding **claim 3**, the combination of Lindoff et al, Hook et al and Shi discloses that the transmitting device is a mobile station MS (see Lindoff et al figure 9), which reads on the claimed “network element”, and the receiving device is a base station BS (see Lindoff et al figure 9), which reads on the claimed “wireless communication device”.

Regarding **claim 4**, the combination of Lindoff et al and Hook et al discloses that different signals may be transmitted through different antennas (see Lindoff et al figure 8B), and describes the differentiation of signals at the mobile station (see Lindoff et al column 4, line 43 – column 5, line 6), then explains that the receiving at the base station is the same as that at the mobile station (see Lindoff et al column 5, lines 44-49).

Regarding **claim 6**, the combination of Lindoff et al, Hook et al and Shi discloses that the system is a TDMA system and that the training sequence TS A is transmitted in each burst for synchronization and radio channel estimation purpose (see Lindoff et al column 3, lines 1-22), which reads on the claimed “the information is transmitted in data frames, which are supplemented with said training sequence”.

Regarding **claim 11**, Lindoff et al discloses a system where a first mobile station is connected to a base station in a particular cell in a TDMA system. The uplink from the MS A to the BS takes place on a carrier frequency f1 and can carry uplink data D0(UL) and the training sequence TS A (see column 3, lines 1-21), which reads on the claimed "communication system comprising at least one transmitting device, at least on receiving device, means for transmitting information from the transmitting device to at least one receiving device, in which transmission at least one training sequence is used". Lindoff et al further discloses that in one embodiment, the MS A may have two antennas 230 and 730 for transmitting signals to the BS, which also may have two antennas 210 and 220 (see figure 9 and column 8, lines 24-33), which reads on the claimed "the receiving device comprises means for the reception of the signal transmitted through said at least two antennas". Lindoff et al discloses that the system is TDMA and that the training sequence is included in each burst (see column 3, lines 1-21), so the information is transmitted in data frames as claimed. Lindoff et al also discloses that the MS may use the same training sequence TS A transmitted from both antennas (see figure 9). In this embodiment, however, Lindoff et al fails to expressly disclose in this particular embodiment that the same training sequence is transmitted with a different phase.

Lindoff et al also discloses in another embodiment uplink sequences are transmitted with different phase-offsets, so a first information sequence has a phi(0) and a second information sequence has a different phase offset phi(1) (see column 6, lines 16-34 and figure 5B).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the first discussed embodiment with the second discussed embodiment so that the MS with two different antennas transmits the same training sequence but with different phases in order to best take advantage of the benefits of the invention, such as increased spectrum efficiency (see column 2, lines 16-17). Also, the combining of various embodiments in full or in part is suggested by Lindoff et al (see column 8, lines 50-64). Lindoff et al fail to disclose a phase of the training sequence is changed by cyclically transferring the training sequence.

In a similar field of endeavor, Hook et al disclose rotating the phase of a training sequence (see column 4, lines 16-35).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Lindoff et al with Hook et al to include the above rotating the phase of the training sequence in order to efficiently transfer types of information as suggested by Hook et al (see column 4, lines 16-35). The combination of Lindoff et al and Hook et al fails to expressly disclose transferring symbols of the training sequence a certain number of bit positions.

In a similar field of endeavor, Shi discloses a training sequence that is cyclically shifted by advancing by one position each element in the vector and the last element is moved to the first element position or vice versa depending of the direction of the shift (see column 1, line 62 – column 2, line 17 and column 12, lines 9-16).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the combination of Lindoff et al and Hook et al to include the

above cyclical shift in order to allow proper temporal alignment as suggested by Shi (see column 1, lines 59-61).

Regarding **claim 12**, the combination of Lindoff et al, Hook et al and Shi discloses that different information may be transmitted from two different antennas (see Lindoff et al column 8, lines 24-33 and figure 8B), which reads on the claimed "the information to be transferred is divided to be transmitted through at least two antennas to the receiving device". The receiving section at the mobile station receives a signal and converts it to a baseband signal as is known in the art. The baseband signal is fed from the block 404 to a synchronization unit 406 that correlates the received sequence with the known training sequences (TS A and TS B) in order to find a synchronization position, which is used with the received burst to estimate the radio channels for the signals (see Lindoff et al figure 4 and column 4, lines 17-50). Lindoff et al then discloses that the receiver structure in the BS (which would be used in the uplink from MS to BS) is similar to the structure in the MS with the exception that the BS has an antenna array (see Lindoff et al column 5, lines 44-49), which reads on the claimed "the receiving device comprises means for examining the transmitted information using signals transmitted through different antennas".

Regarding **claim 13**, the combination of Lindoff et al, Hook et al and Shi discloses that the transmitting device is a mobile station MS (see Lindoff et al figure 9), which reads on the claimed "network element", and the receiving device is a base station BS (see Lindoff et al figure 9), which reads on the claimed "wireless communication device".

Regarding **claim 14**, the combination of Lindoff et al, Hook et al and Shi discloses that different signals may be transmitted through different antennas (see Lindoff et al figure 8B), and describes the differentiation of signals at the mobile station (see Lindoff et al column 4, line 43 – column 5, line 6), then explains that the receiving at the base station is the same as that at the mobile station (see Lindoff et al column 5, lines 44-49).

Regarding **claim 16**, the combination of Lindoff et al, Hook et al and Shi discloses that the system is a TDMA system and that the training sequence TS A is transmitted in each burst for synchronization and radio channel estimation purpose (see Lindoff et al column 3, lines 1-22), which reads on the claimed “means for transmission of information in data frames, which are supplemented with said training sequence”.

Regarding **claim 21**, Lindoff et al discloses a system where a first mobile station is connected to a base station in a particular cell in a TDMA system. The uplink from the MS A to the BS takes place on a carrier frequency f1 and can carry uplink data D0(UL) and the training sequence TS A (see column 3, lines 1-21), which reads on the claimed “network element to be used in a communication system, comprising means for transmitting information from the network element to a wireless device, in which the transmission uses at least one training sequence”. Lindoff et al further discloses that in one embodiment, the MS A may have two antennas 230 and 730 for transmitting signals to the BS, which also may have two antennas 210 and 220 (see figure 9 and column 8, lines 24-33), which reads on the claimed “network information is transmitted with at least two antennas”. Lindoff et al discloses that the system is TDMA and that the

training sequence is included in each burst (see column 3, lines 1-21), so the information is transmitted in data frames as claimed. Lindoff et al also discloses that the MS may use the same training sequence TS A transmitted from both antennas (see figure 9). In this embodiment, however, Lindoff et al fails to expressly disclose in this particular embodiment that the same training sequence is transmitted with a different phase.

Lindoff et al also discloses in another embodiment uplink sequences are transmitted with different phase-offsets, so a first information sequence has a phi(0) and a second information sequence has a different phase offset phi(1) (see column 6, lines 16-34 and figure 5B).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the first discussed embodiment with the second discussed embodiment so that the MS with two different antennas transmits the same training sequence but with different phases in order to best take advantage of the benefits of the invention, such as increased spectrum efficiency (see column 2, lines 16-17). Also, the combining of various embodiments in full or in part is suggested by Lindoff et al (see column 8, lines 50-64). Lindoff et al fail to disclose a phase of the training sequence is changed by cyclically transferring the training sequence.

In a similar field of endeavor, Hook et al disclose rotating the phase of a training sequence (see column 4, lines 16-35).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Lindoff et al with Hook et al to include the above rotating the

phase of the training sequence in order to efficiently transfer types of information as suggested by Hook et al (see column 4, lines 16-35). The combination of Lindoff et al and Hook et al fails to expressly disclose transferring symbols of the training sequence a certain number of bit positions.

In a similar field of endeavor, Shi discloses a training sequence that is cyclically shifted by advancing by one position each element in the vector and the last element is moved to the first element position or vice versa depending of the direction of the shift (see column 1, line 62 – column 2, line 17 and column 12, lines 9-16).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the combination of Lindoff et al and Hook et al to include the above cyclical shift in order to allow proper temporal alignment as suggested by Shi (see column 1, lines 59-61).

Regarding **claim 22**, Lindoff et al discloses a system where a first mobile station is connected to a base station in a particular cell in a TDMA system. The uplink from the MS A to the BS takes place on a carrier frequency f1 and can carry uplink data D0(UL) and the training sequence TS A (see column 3, lines 1-21), which reads on the claimed "wireless communication device be used in a communication system, comprising at least one network element, means for transmitting information from the network element to a wireless communication device, in which the transmission uses at least one training sequence". Lindoff et al further discloses that in one embodiment, the MS A may have two antennas 230 and 730 for transmitting signals to the BS, which also may have two antennas 210 and 220 (see figure 9 and column 8, lines 24-33),

which reads on the claimed "information is transmitted by using at lest two antennas, wherein the wireless communication device comprises means for reception of the signal transmitted through said at least two antennas". Lindoff et al discloses that the system is TDMA and that the training sequence is included in each burst (see column 3, lines 1-21), so the information is transmitted in data frames as claimed. The receiving section at the mobile station receives a signal and converts it to a baseband signal as is known in the art. The baseband signal is fed from the block 404 to a synchronization unit 406 that correlates the received sequence with the known training sequences (TS A and TS B) in order to find a synchronization position, which is used with the received burst to estimate the radio channels for the signals (see figure 4 and column 4, lines 17-50). Lindoff et al then discloses that the receiver structure in the BS (which would be used in the uplink from MS to BS) is similar to the structure in the MS with the exception that the BS has an antenna array (see column 5, lines 44-49), which reads on the claimed "the wireless communication device comprises means for performing channel correction on the basis of the signal transmitted by at least two different antennas and received by the wireless communication device". Lindoff et al also discloses that the MS may use the same training sequence TS A transmitted from both antennas (see figure 9). In this embodiment, however, Lindoff et al fails to expressly disclose in this particular embodiment that the same training sequence is transmitted with a different phase.

Lindoff et al also discloses in another embodiment uplink sequences are transmitted with different phase-offsets, so a first information sequence has a phi(0) and

a second information sequence has a different phase offset phi(1) (see column 6, lines 16-34 and figure 5B).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the first discussed embodiment with the second discussed embodiment so that the MS with two different antennas transmits the same training sequence but with different phases in order to best take advantage of the benefits of the invention, such as increased spectrum efficiency (see column 2, lines 16-17). Also, the combining of various embodiments in full or in part is suggested by Lindoff et al (see column 8, lines 50-64). Lindoff et al fail to disclose a phase of the training sequence is changed by cyclically transferring the training sequence.

In a similar field of endeavor, Hook et al disclose rotating the phase of a training sequence (see column 4, lines 16-35).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Lindoff et al with Hook et al to include the above rotating the phase of the training sequence in order to efficiently transfer types of information as suggested by Hook et al (see column 4, lines 16-35). The combination of Lindoff et al and Hook et al fails to expressly disclose transferring symbols of the training sequence a certain number of bit positions.

In a similar field of endeavor, Shi discloses a training sequence that is cyclically shifted by advancing by one position each element in the vector and the last element is moved to the first element position or vice versa depending of the direction of the shift (see column 1, line 62 – column 2, line 17 and column 12, lines 9-16).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the combination of Lindoff et al and Hook et al to include the above cyclical shift in order to allow proper temporal alignment as suggested by Shi (see column 1, lines 59-61).

Regarding **claim 23**, the combination of Lindoff et al and Hook et al fails to expressly disclose cyclically transferring the training sequence comprises cyclically shifting a position of each bit in the training sequence.

In a similar field of endeavor, Shi discloses a training sequence that is cyclically shifted by advancing by one position each element in the vector and the last element is moved to the first element position or vice versa depending of the direction of the shift (see column 1, line 62 – column 2, line 17 and column 12, lines 9-16).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the combination of Lindoff et al and Hook et al to include the above cyclical shift in order to allow proper temporal alignment as suggested by Shi (see column 1, lines 59-61).

Regarding **claim 24**, Lindoff et al fail to expressly disclose the phase of the training sequence is changed by a cyclical shift of a position of each symbol in the training sequence.

In a similar field of endeavor, Hook et al disclose rotating the phase of a training sequence (see column 4, lines 16-35).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Lindoff et al with Hook et al to include the above rotating the

phase of the training sequence in order to efficiently transfer types of information as suggested by Hook et al (see column 4, lines 16-35). The combination of Lindoff et al and Hook et al fails to expressly disclose transferring symbols of the training sequence a certain number of bit positions.

In a similar field of endeavor, Shi discloses a training sequence that is cyclically shifted by advancing by one position each element in the vector and the last element is moved to the first element position or vice versa depending of the direction of the shift (see column 1, line 62 – column 2, line 17 and column 12, lines 9-16).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the combination of Lindoff et al and Hook et al to include the above cyclical shift in order to allow proper temporal alignment as suggested by Shi (see column 1, lines 59-61).

Regarding **claim 25**, Lindoff et al fail to expressly disclose the phase of the training sequence is changed by cyclically shifting a position of each symbol in the set of symbols.

In a similar field of endeavor, Hook et al disclose rotating the phase of a training sequence (see column 4, lines 16-35).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Lindoff et al with Hook et al to include the above rotating the phase of the training sequence in order to efficiently transfer types of information as suggested by Hook et al (see column 4, lines 16-35). The combination of Lindoff et al

and Hook et al fails to expressly disclose transferring symbols of the training sequence a certain number of bit positions.

In a similar field of endeavor, Shi discloses a training sequence that is cyclically shifted by advancing by one position each element in the vector and the last element is moved to the first element position or vice versa depending of the direction of the shift (see column 1, line 62 – column 2, line 17 and column 12, lines 9-16).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the combination of Lindoff et al and Hook et al to include the above cyclical shift in order to allow proper temporal alignment as suggested by Shi (see column 1, lines 59-61).

Claims 7 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lindoff et al in view of Hook et al and Shi as applied to claims 1 and 11 above, and further in view of Guan (US005440347A).

Regarding **claims 7 and 17**, the combination of Lindoff et al, Hook et al and Shi fails to expressly disclose that the phase shift of training signals is chosen to minimize the interference between the training sequences.

In a similar field of endeavor, Guan discloses a system to minimize interference in digital transmissions where a training sequence inverter 20 acts to aperiodically invert selected training sequences in order to avoid the periodicity which results in the undesired interference, and the inversion of a sequence, in terms of complex representation, represents a 180 degree rotation (see column 3, lines 32-40), which

reads on the claimed invention where the phase shift of the training sequence is defined by minimizing the interference between the training sequences.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the combination of Lindoff et al, Hook et al and Shi with Guan in order to avoid as much as possible the problems caused by interference such as distortion.

Claims 5, 9, 10, 15, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lindoff et al in view of Hook et al as applied to claims 1 and 11 above, and further in view of Persson et al (US005577047A).

Regarding **claims 5 and 15**, as applied to claims 1 and 11, the combination of Lindoff et al, Hook et al and Shi discloses different phases of the same training sequence are used in at least two of said wireless communication devices (see Lindoff et al figure 9 and column 8, lines 24-33 and column 6, lines 16-34 and figure 5B). The combination of Lindoff et al, Hook et al and Shi fails to expressly disclose that signals transmitted by at least two wireless communication devices are received.

In a similar field of endeavor, Persson et al discloses a system for providing soft handover in a TDMA (see column 4, lines 3-20).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the combination of Lindoff et al, Hook et al and Shi with Persson et al to include the above soft handover in the TDMA system in order to take advantage

of the benefits of soft handover, such as no interruption of traffic whatsoever as disclosed by Persson et al (see column 2, lines 25-34).

Regarding **claims 9 and 19**, the combination of Lindoff et al, Hook et al and Shi fails to expressly disclose that the transmitting device, or mobile station, is in connection with two or more receiving devices, or base stations, as claimed.

In a similar field of endeavor, Persson et al discloses a system for providing soft handover in a TDMA (see column 4, lines 3-20).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the combination of Lindoff et al, Hook et al and Shi with Persson et al to include the above soft handover in the TDMA system in order to take advantage of the benefits of soft handover, such as no interruption of traffic whatsoever as disclosed by Persson et al (see column 2, lines 25-34). The resultant combination would have a mobile station, or transmitter, that may be connected to two base stations, or receivers, as claimed.

Regarding **claims 10 and 20**, the combination of Lindoff et al, Hook et al, Shi and Persson et al discloses the same training sequence is used in the mobile station (see rejection of claims 1 and 11 above). Since it is the same training sequence, it must be part of the same training sequence family and reads on the claimed "for one network element one of said training sequences is selected at a time".

Allowable Subject Matter

Claims 8 and 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

Applicant's arguments with respect to claims 1-22, 24 and 25 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bryan J. Fox whose telephone number is (571) 272-7908. The examiner can normally be reached on Monday through Friday 9am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles N. Appiah can be reached on (571) 272-7904. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Bryan Fox
June 11, 2007

Nguyen

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